

**Trouble Shooting:**

Problem	Possible Cause	Possible Solution
Wavy or ghost image if connected to image processor (e.g., multiplexer or DVR), but not if directly to monitor?	a. Strong electromagnetic interference. b. Split pairs. c. Crimped cable.	a. Move the cable away from possible sources of interference. b. Ensure same twisted pair connects to balun at both ends of cable. c. Replace cable with new cable.
Image background flutters between dark and light?	Interference from external power source.	Remove power source, or adjust monitor's brightness and contrast.
Image is weak or faded?	a. Exceeded recommended balun separation. b. Using lower-grade cable than recommended.	a. Reduce cable length. b. Replace with a higher-grade cable. CAT 5 cable meets specifications in the manual. CAT 5E or better cable allows longer range.
No image?	a. Power is off. b. Cable is incorrectly connected/crimped. c. Cable was accidentally cut. d. Defective video source. e. Defective video destination.	a. Check the power supplies of all devices connected to the cable. b. Double-check that the cable was connected and crimped properly. c. Run a continuity test on all wires in the cable. d. Replace the unit with a new unit. e. Replace the unit with a new unit.

**IMPORTANT:** Users and installers of this product are responsible for ensuring this product complies with all national, state, and local laws and statutes related to monitoring and recording audio and video signals. **SECO-LARM** will not be held responsible for the use of this product in violation of any current laws or statutes.

**WARNING:** Incorrect mounting which leads to exposure to rain or moisture inside the enclosure could cause a dangerous electric shock, damage the device, and void the warranty. Do not open the case of this device, as there are no field-serviceable components inside.

**WARRANTY:** This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for a period of one (1) year from the date of sale to the original consumer customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM. This Warranty is void if damage is caused by or attributed to acts of God, physical or electrical misuse or abuse, neglect, repair, or alteration, improper or abnormal usage, or faulty installation, or if for any other reason SECO-LARM determines that such equipment is not operating properly as a result of causes other than defects in material and workmanship. The sole obligation of SECO-LARM, and the purchaser's exclusive remedy, shall be limited to replacement or repair only, at SECO-LARM's option. In no event shall SECO-LARM be liable for any special, collateral, incidental, or consequential personal or property damages of any kind to the purchaser or anyone else.

**NOTICE:** The information and specifications printed in this manual are current at the time of publication. However, the SECO-LARM policy is one of continual development and improvement. For this reason, SECO-LARM reserves the right to change specifications without notice. SECO-LARM is also not responsible for misprints or typographical errors.

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# Installation Manual

## **ENFORCER®** Passive VGA Baluns

### **EVT-SBP-GQ**

VGA Balun Set

### **EVT-TBP-GCNQ\***

TX / PC / Source Side

### **EVT-RBP-GNCQ\***

RX / Monitor / Destination Side

**Range: Up to 450' (137m)  
over STP cable**



#### **CA-1D1DQ Gender Changer.**

Allows EVT-RBP-GNCQ to connect to certain CRT monitor cables. Product sold separately

\*Note: SECO-LARM Passive VGA Baluns are sold as a set only. The model numbers EVT-TBP-GCNQ (transmitter / PC / source side) and EVT-RBP-GNCQ (receiver / monitor / destination side) are provided for identification purposes only.



### **What it is:**

VGA baluns allow extension of the range between CCTV video sources such as PCs, digital video recorders, or video splitters, and CCTV video destinations such as CRT / LCD monitors or video projectors. The range is up to 450 feet (137m). The connection is via low-cost Cat 5 or Cat 5E shielded twisted-pair (STP) cable with shielded RJ-45 connectors. This allows the monitor or projector to be easily installed on a security professional's desk while the video devices are locked securely in a separate room.

### **Features:**

Note: For some CRT monitors, a gender changer may be required. The CA-1D1DQ is designed to connect the EVT-RBP-GNCQ to the CRT monitor cable.

- Passive operation – No power required.
- Sends a VGA video signal from a VGA source (personal computer, digital video recorder, video splitter, or other video source) to a VGA destination (CRT monitor, LCD monitor, or VGA projector).
- Uses Cat 5 or Cat 5E shielded twisted pair (STP) cable instead of heavier, more expensive VGA cables.
- Works at the following resolutions and maximum distances:

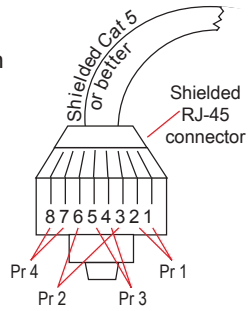
640x480 (VGA)	450ft (137m)
800x600 (SVGA)	350ft (107m)
1024x768 (XGA)	250ft (76m)
1280x1024 (SXGA)	200ft (61m)

- Small size, only 2 1/8" x 1 3/16" x 1" (55 x 30 x 26 mm) with a 6" (152mm) pigtail for the VGA connector.
- The EVT-SBP-GQ is sold as a set - one for the source side, one for the monitor side.

**Installation:**

1. Make sure to use shielded twisted pair (STP) cable terminated with shielded RJ-45 connectors. This will ensure good signal levels between the various video components.
2. Since Cat 5 does not have sufficient lines to support VGA handshaking and control signals, it will be necessary to configure the monitor settings before installing the baluns:  
To configure the monitor, connect it to the PC (or other video source), using a standard VGA cable. Configure the monitor (resolution, color depth, refresh rate, and so on) to the desired settings. Also, set the contrast and brightness levels to maximum. These will be adjusted after the VGA baluns are connected.
3. Turn off the power to the PC and monitor and disconnect the VGA cable.
4. Connect the PC side balun (EVT-TBP-GCNQ) to the VGA connector of the PC or video source.
5. Connect the monitor end balun (EVT-RBP-GNCQ) to the VGA display screen or video destination.  
Note: For CRT monitors, a gender changer may be required. The CA-1D1DQ is designed to connect the EVT-RBP-GNCQ to the CRT monitor cable.
6. Connect a shielded Cat 5 cable to the RJ-45 jacks on each of the baluns.
7. Make sure to tighten all the connections.
8. Turn on the PC and monitor.
9. Adjust the monitor contrast and brightness settings for comfortable viewing.

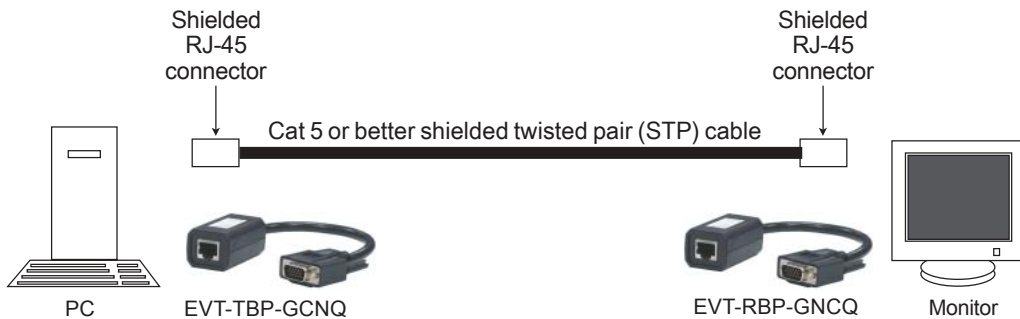
**Figure 1:**  
RJ-45 shielded pin configuration



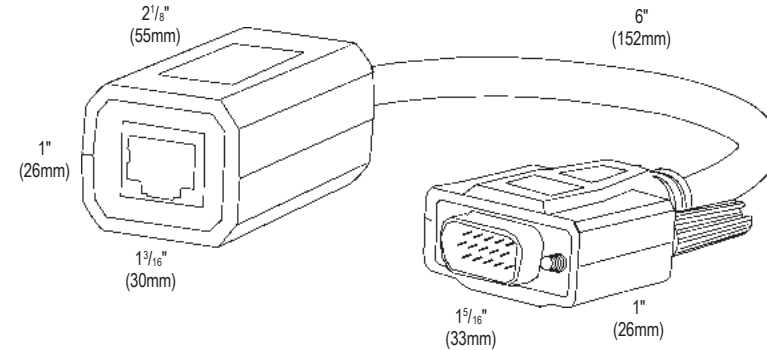
**568-B Wiring Specification**

Pair #	Wire	Pin #	Configuration
1	Orange/Wht	1	R Video (+)
	Orange	2	R Video (-)
2	Green/Wht	3	Horizontal Sync
	Green	6	Vertical Sync
3	Blue	4	G Video (+)
	Blue/Wht	5	G Video (-)
4	Brown/Wht	7	B Video (+)
	Brown	8	B Video (-)

**Figure 2:**



**Figure 7:**  
Dimensions



**Specifications:**

Bandwidth	DC to 60MHz																																
Impedance	Input: RGB 75Ω (DB15 HD) Output: RGB 100Ω (RJ-45 shielded) Horizontal & vertical sync: TTL standard																																
Insertion loss	Less than 3dB per pair over frequency range.																																
Video Signal Return loss	Greater than -15dB over frequency range																																
Common mode rejection (CMRR)	15kHz -60dB max., 100kHz to 10MHz -40dB max. 100MHz -20dB max.																																
Devices	PCs, DVRs, DVD players, CRT/LCD/Plasma displays, and projectors																																
Connectors	RJ-45 shielded DB15 HD male (to VGA output of PC), 6" lead DB15 HD male (to VGA monitor input), 6" lead																																
Cable	Cat 5 or better shielded twisted pair (STP) is recommended																																
Maximum Distance: Cat 5 shielded twisted-pair cable	VGA: 640x480, 450' (137m) SVGA: 800x600, 350' (107m) XGA: 1024x768, 250' (76m) SXGA: 1280x1024, 200ft (61m)																																
RJ-45 Pin out	<table border="1"> <thead> <tr> <th>Pair #</th> <th>Wire</th> <th>Pin #</th> <th>Configuration</th> </tr> </thead> <tbody> <tr> <td rowspan="2">1</td> <td>Orange/Wht</td> <td>1</td> <td>R Video (+)</td> </tr> <tr> <td>Orange</td> <td>2</td> <td>R Video (-)</td> </tr> <tr> <td rowspan="2">2</td> <td>Green/Wht</td> <td>3</td> <td>Horizontal Sync</td> </tr> <tr> <td>Green</td> <td>6</td> <td>Vertical Sync</td> </tr> <tr> <td rowspan="2">3</td> <td>Blue</td> <td>4</td> <td>G Video (+)</td> </tr> <tr> <td>Blue/Wht</td> <td>5</td> <td>G Video (-)</td> </tr> <tr> <td rowspan="2">4</td> <td>Brown/Wht</td> <td>7</td> <td>B Video (+)</td> </tr> <tr> <td>Brown</td> <td>8</td> <td>B Video (-)</td> </tr> </tbody> </table>	Pair #	Wire	Pin #	Configuration	1	Orange/Wht	1	R Video (+)	Orange	2	R Video (-)	2	Green/Wht	3	Horizontal Sync	Green	6	Vertical Sync	3	Blue	4	G Video (+)	Blue/Wht	5	G Video (-)	4	Brown/Wht	7	B Video (+)	Brown	8	B Video (-)
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Operating Temperature	32°~131° F (0°~55° C)																																
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